

# If the diabetes has a direct carcinogenetic effect?

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The association of DM2 with solid tumors, and particularly with HCC, has been long suspected and several studies have reported increased mortality rates for neoplastic diseases in patients with DM2. However, the temporal relationship between onset of diabetes and development of HCC, and the clinical and metabolic characteristics of patients with DM2 and HCC have not been well examined.

A research article to be published on October 7, 2008 in the *World Journal of Gastroenterology* addresses this question. The research team led by Dr. Valter Donadon from Pordenone Hospital of Italy investigated the relationships between DM2 and risk of HCC in a large population based case-control study. They enrolled 465 consecutive patients with HCC compared with an age and sex matched control group of 490 subjects.

Their results confirm that patients with DM2 have a significantly increased risk of HCC, independent of cofactors such as HBV and HCV infection and alcohol intake, and demonstrate that DM2 pre-exists to the development of HCC in most cases, suggesting that DM2 is more likely a concourse rather than merely a consequence of the liver tumor. This conclusion is also supported by the finding of a similar frequency and severity of DM2 in patients with small HCC detected during follow-up of cirrhosis and in those with more advanced and diffuse cancers detected outside of a surveillance program. The observation that patients with DM2, particularly males, treated with insulin had an increased frequency of HCC is intriguing and clinically relevant. These patients are those often showing the highest insulin blood levels, and this might contribute to facilitate the development of HCC.

Source: World Journal of Gastroenterology

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